

In the Claims

Please amend Claims 1, 53, 67, 75-82, 84, and 92-99 all as shown below. Applicant respectfully reserves the right to prosecute any originally presented claims in a continuing or future application.

1. (Currently Amended) A method of managing a virtual content repository (VCR) that represents a plurality of content repositories, the method comprising:

creating [[a]] at least one content node for each of the plurality of content repositories and associating each content node with its own content schema, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories;

creating a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

creating a hierarchy of organizing the content and hierarchy nodes into a hierarchy in the VCR, and for each hierarchy node

indicating a location of associating the hierarchy node in the hierarchy by with an identifier that specifies its path location within the VCR,

relating the hierarchy node to a different type of content,

associating the hierarchy node with at least one parent content node and associating the hierarchy node with one or more child content nodes, and

applying the hierarchy node's schema to each of the child content nodes, and

associating the hierarchy node with its own hierarchy schema;

storing the hierarchy and content nodes in the VCR, resulting in storing each hierarchy and content schema in one of the plurality of content repositories; and

presenting the plurality of content repositories associated with the VCR as a single content repository to an application program interface, wherein each of the hierarchy schemas and content schemas remain associated with their respective hierarchy nodes and content nodes.

2. (Previously Presented) The method of claim 1 wherein:

the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

3. (Previously Presented) The method of claim 2 wherein:
the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.
4. (Previously Presented) The method of claim 1 wherein:
the application program interface comprises one or more of a VCR browser, a content node editor, a schema editor and a property editor.
5. (Previously Presented) The method of claim 2 wherein:
each property comprises at least one property definition.
6. (Previously Presented) The method of claim 5 wherein:
the at least one property definition can specify at least one of
property choices,
a reference,
a data type,
whether each property is mandatory,
whether each property is multi-valued,
whether each property is primary,
whether each property is read-only, and
whether each property is restricted.
- 7-48. (Canceled).
49. (Previously Presented) The method of claim 1 wherein:
the identifier is a path.
- 50-52. (Canceled).
53. (Currently Amended) A method of managing a virtual content repository (VCR) that represents a plurality of content repositories, the method comprising:

creating ~~[[a]]~~ at least one content node for each of the plurality of content repositories, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories and wherein each content node is associated with its own schema;

creating a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

~~creating a hierarchy of~~ organizing the content and hierarchy nodes into a hierarchy in the VCR; ~~comprising the substeps of~~

~~associating indicating a location of~~ each hierarchy node in the hierarchy by with an identifier that specifies its path location in the VCR; ~~and~~

~~relating each hierarchy node to a different type of content;~~

associating each hierarchy node with at least one parent content node and with one or more child content nodes;

applying each hierarchy node's schema to each of its child content nodes;

~~wherein each hierarchy node is associated with a hierarchy schema and wherein each content node is associated with a content schema;~~

~~storing the hierarchy and content nodes in the VCR, resulting in storing each hierarchy and content schema in one of the plurality of content repositories; and~~

presenting the plurality of content repositories associated with the VCR as a single content repository to an application program interface, wherein the hierarchy and content each of the schemas remain associated with their respective ~~hierarchy and content nodes.~~

54. (Previously Presented) The method of claim 53 further comprising:
associating each hierarchy node with its own hierarchy schema; and
associating each content node with its own content schema.

55. (Canceled).

56. (Previously Presented) The method of claim 54 wherein:
the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

57. (Previously Presented) The method of claim 56 wherein:
the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.
58. (Previously Presented) The method of claim 53 wherein:
the application program interface comprises integrating one or more of a VCR browser, a content node editor, a schema editor and a property editor.
59. (Previously Presented) The method of claim 56 wherein:
each property comprises at least one property definition.
60. (Previously Presented) The method of claim 59 wherein:
the at least one property definition can specify at least one of
property choices,
a reference,
a data type,
whether each property is mandatory,
whether each property is multi-valued,
whether each property is primary,
whether each property is read-only, and
whether each property is restricted.
61. (Canceled).
62. (Previously Presented) The method of claim 53 further comprising:
searching for one of a hierarchy node and a content node returning a selected node; and
performing an operation on the selected node, the operation comprising one of deleting the selected node, changing the location of the selected node in the VCR, reading the selected node, and updating the selected node.
- 63-66. (Canceled).

67. (Currently Amended) A system of managing a virtual content repository (VCR) that represents a plurality of content repositories, the system comprising:

a plurality of content repositories, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories;

[[a]] at least one content node created for each of the plurality of content repositories, each content node comprising a content schema associated with the content node;

a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

a hierarchy of the content and hierarchy nodes created in the VCR, each hierarchy node comprising

~~an identifier that indicates a location specifies its path location within the VCR of the hierarchy node in the hierarchy,~~

~~a different content type to which the hierarchy node is related,~~

an association with at least one parent content node and one or more child content nodes, and

~~a hierarchy schema associated with the hierarchy node wherein the hierarchy node's schema is applied to each of the child content nodes;~~

an application program interface to which the plurality of content repositories associated with the content nodes of the VCR is presented as a single content repository; and

wherein each of the hierarchy and content nodes are stored in the VCR ~~that results in storage of each hierarchy and content schema in one of the plurality of content repositories and wherein each of the hierarchy and content schemas remain associated with their respective hierarchy and content nodes.~~

68. (Previously Presented) The system of claim 67 wherein:

the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

69. (Previously Presented) The system of claim 68 wherein:

the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

70. (Previously Presented) The system of claim 67 wherein:
the application program interface comprises one or more of a VCR browser, a content node editor, a schema editor and a property editor.
71. (Previously Presented) The system of claim 68 wherein:
each property comprises at least one property definition.
72. (Previously Presented) The system of claim 71 wherein:
the at least one property definition can specify at least one of
property choices,
a reference,
a data type,
whether each property is mandatory,
whether each property is multi-valued,
whether each property is primary,
whether each property is read-only, and
whether each property is restricted.
73. (Previously Presented) The system of claim 67 wherein:
the identifier is a path.
74. (Previously Presented) The system of claim 67 further comprising:
a search for one of a hierarchy node and a content node that returns a selected node;
and
an operation performed on the selected node, the operation comprising one of: a deletion of the selected node; a change of the selected node location in the VCR; a reading of the schema associated with the selected node; and an update of the schema associated with the selected node.
75. (Currently Amended) A computer readable storage medium for managing on a virtual content repository (VCR) that represents a plurality of content repositories, the computer readable medium having instructions stored thereon that when executed by one or more processors on the computer cause the computer to:

create ~~[[a]]~~ at least one content node for each of the plurality of content repositories and associate each content node with its own ~~content~~ schema, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories;

create a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

~~create a hierarchy of~~ organize the content and hierarchy nodes into a hierarchy in the VCR, and for each hierarchy node

~~indicate a location of~~ associate the hierarchy node in the hierarchy by with an identifier that specifies its path location in the VCR,

~~relate the hierarchy node to a different type of content,~~

associate the hierarchy node with at least one parent content node and one or more child content nodes, and[::]

apply the hierarchy node's schema to each of the child content nodes;

~~store the hierarchy and content nodes in the VCR, resulting in storing each hierarchy and content schema in one of the plurality of content repositories; and~~

present the plurality of content repositories associated with the VCR as a single content repository to an application program interface, wherein the ~~hierarchy and content~~ schemas remain associated with their respective ~~hierarchy and content~~ nodes.

76. (Currently Amended) The computer readable storage medium of claim 75 wherein:
the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

77. (Currently Amended) The computer readable storage medium of claim 76 wherein:
the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

78. (Currently Amended) The computer readable storage medium of claim 75 wherein:
the application program interface comprises one or more of a VCR browser, a content node editor, a schema editor and a property editor.

79. (Currently Amended) The computer readable storage medium of claim 76 wherein:
each property comprises at least one property definition.
80. (Currently Amended) The computer readable storage medium of claim 79 wherein:
the at least one property definition can specify at least one of
property choices,
a reference,
a data type,
whether each property is mandatory,
whether each property is multi-valued,
whether each property is primary,
whether each property is read-only, and
whether each property is restricted.
81. (Currently Amended) The computer readable storage medium of claim 75 wherein:
the identifier is a path.
82. (Currently Amended) The computer readable storage medium of claim 75 further
comprising:
search for one of a hierarchy node and a content node that returns a selected node; and
perform an operation on the selected node, the operation comprising one of: delete the
selected node; change the location of the selected node in the VCR; read the schema
associated with the selected node; and update the schema associated with the selected node.
83. (Previously Presented) The method of claim 1 further comprising:
searching for one of a hierarchy node and a content node returning a selected node; and
performing an operation on the selected node, the operation comprising one of: deleting
the selected node; changing the location of the selected node in the VCR; reading the schema
associated with the selected node; and updating the schema associated with the selected node.
84. (Currently Amended). A system of managing a virtual content repository (VCR) that
represents a plurality of content repositories, the method comprising:

a plurality of content repositories, wherein each of the plurality of content repositories includes content that is unique from content in the other content repositories;

[[a]] at least one content node created for each of the plurality of content repositories wherein each content node is associated with its own schema;

a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

a hierarchy of the content and hierarchy nodes created in the VCR, each hierarchy node comprising an identifier that ~~indicates a location of each hierarchy node specifies the hierarchy node's path location~~ in the VCR; hierarchy, and

~~a different content type to which each hierarchy node is related;~~

~~wherein each hierarchy node is associated with a hierarchy schema and wherein each content node is associated with a content schema;~~

wherein each hierarchy node is associated with at least one parent content node and with one or more child content nodes and wherein each hierarchy node's schema is applied to its child content nodes;

~~storage of the hierarchy and content nodes in the VCR, resulting in storing each hierarchy and content schema in one of the plurality of content repositories; and~~

an application program interface that presents the plurality of content repositories associated with the VCR as a single content repository wherein the hierarchy and content schemas remain associated with their respective hierarchy and content nodes.

87. (Previously Presented) The system of claim 84 further comprising:
an association of each hierarchy node with its own hierarchy schema; and
an association of each content node with its own content schema.

86. (Previously Presented) The system of claim 85 wherein:
the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

87. (Previously Presented) The system of claim 86 wherein:
the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

88. (Previously Presented) The system of claim 84 wherein:
the application program interface comprises integrating one or more of a VCR browser,
a content node editor, a schema editor and a property editor.
89. (Previously Presented) The system of claim 86 wherein:
each property comprises at least one property definition.
90. (Previously Presented) The system of claim 89 wherein:
the at least one property definition can specify at least one of
property choices,
a reference,
a data type,
whether each property is mandatory,
whether each property is multi-valued,
whether each property is primary,
whether each property is read-only, and
whether each property is restricted.
91. (Previously Presented) The system of claim 84 further comprising:
a search for one of a hierarchy node and a content node that returns a selected node;
and
an operation performed on the selected node, the operation comprising one of: a
deletion of the selected node; a change of the selected node location in the VCR; a reading of
the selected node; and an update of the selected node.
92. (Currently Amended) A computer readable storage medium for managing a virtual
content repository (VCR) that represents a plurality of content repositories, the computer
readable medium having instructions stored thereon that when executed by one or more
processors on the computer cause the computer to:
create [[a]] at least one content node for each of the plurality of content repositories,
wherein each of the plurality of content repositories includes content that is unique from content

in the other content repositories and wherein each content node is associated with its own schema;

create a plurality of hierarchy nodes, wherein each hierarchy node is a container for one or more of the content nodes, and wherein each hierarchy node is also associated with its own schema;

~~create a hierarchy of~~ organize the content and hierarchy nodes into a hierarchy in the VCR ~~comprising the substeps of including indicate a location of associating~~ each hierarchy node ~~in the hierarchy by with an identifier that specifies its path location in the VCR;~~ and

~~relate each hierarchy node to a different type of content;~~

associate each hierarchy node with at least one parent content node and with one or more child content nodes;

applying each hierarchy node's schema to its child content nodes;

~~wherein each hierarchy node is associated with a hierarchy schema and wherein each content node is associated with a content schema;~~

store the hierarchy and content nodes in the VCR, ~~resulting in storing each hierarchy and content schema in one of the plurality of content repositories;~~ and

present the plurality of content repositories associated with the VCR as a single content repository to an application program interface, wherein the ~~hierarchy and content schemas remain associated with their respective hierarchy and content nodes.~~

93. (Currently Amended) The computer readable storage medium of claim 92 further comprising:

associate each hierarchy node with its own hierarchy schema; and

associate each content node with its own content schema.

94. (Currently Amended) The computer readable storage medium of claim 93 wherein:

the hierarchy and content schemas comprise one or more properties, wherein each property is an association between a name and at least one value.

95. (Currently Amended) The computer readable storage medium of claim 94 wherein:

the at least one value comprises one of a text string, a number, an image, an audio/visual presentation, and binary data.

96. (Currently Amended) The computer readable storage medium of claim 92 wherein:
the application program interface comprises integrating one or more of a VCR browser,
a content node editor, a schema editor and a property editor.
97. (Currently Amended) The computer readable storage medium of claim 94 wherein:
each property comprises at least one property definition.
98. (Currently Amended) The computer readable storage medium of claim 97 wherein:
the at least one property definition can specify at least one of
property choices,
a reference,
a data type,
whether each property is mandatory,
whether each property is multi-valued,
whether each property is primary,
whether each property is read-only, and
whether each property is restricted.
99. (Currently Amended) The computer readable storage medium of claim 92 further
comprising:
search for one of a hierarchy node and a content node that returns a selected node; and
perform an operation on the selected node, the operation comprising one of: delete the
selected node; change the location of the selected node in the VCR; read the selected node;
and update the selected node.